

REMARKS

The remainder of this Reply is set forth under appropriate subheadings for the convenience of the Examiner.

Rejection of Claims Under 35 U.S.C. §102(e)

Claims 1-7, 9, 11, 12 and 15 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Publication No. 2003/0199872, by Markworth *et al.* (Markworth *et al.*). In particular the Examiner stated that Markworth *et al.* teach an implantation device that includes a frame having a trigger mechanism, 514, an outer sleeve, 400, mechanically coupled to the frame, an inner shaft 300, having a grabber, 206, for mechanically engaging in an implant and a retaining spring element, 600, for directing the grabber toward a closed position, whereby the grabber is substantially contained within the outer sleeve when the trigger is released. The Examiner also stated that Markworth *et al.* teach a depth control member, 200, slidably coupled to the outer sleeve, a protrusion, 112, on the outer sleeve for slidably engaging a distraction instrument, a knob, 712, mechanically coupled to the outer sleeve and markings, e.g. 111, on the grabber to identify a position of an implant. Further, the Examiner stated that the manner in which a device is intended to be employed does not differentiate the claimed apparatus from prior apparatus satisfying the claimed structural limitations.

Applicant's claimed implant device, as set forth in independent claim 1, includes a frame having a trigger mechanism and an outer sleeve mechanically coupled to the frame. An inner shaft having a grabber for mechanically engaging an implant is slidably disposed along a major access of the inner shaft within the outer sleeve. Actuation of the trigger extends the grabber from the outer sleeve to thereby release the implant. A retaining element of the implant device directs the grabber toward a closed position, whereby the grabber is substantially contained within the outer sleeve when the trigger is released.

Markworth *et al.* teach an apparatus that includes a longitudinal body 20, a slide 300, a sleeve 400 (Fig. 1B) and a trigger 500. Page 3, paragraph 41 of Markworth *et al.*, states that slide 300 and sleeve 400 together form a pusher member. Paragraph 42 of Markworth *et al.* states that a pair of fingers 206 extend from second end 204 of body 200. Fingers 206 are rigid, but are elastic so that, "a force may be applied to the body in order to insert the coupling element 104 between fingers 206"; as is also stated at paragraph 42:

As shown in **FIG. 1E**, the coupling element **104** defines grooves **105** for receiving notches **211**. The fingers [shown in **FIGS. 1A - 1C**] are rigid, but also elastic so that they act in a springing motion so that the application of a force will separate the fingers. Thus, a force may be applied to the body in order to insert the coupling element **104** between the fingers **206**, as shown in **FIG. 1D**. Once in position, the fingers **206** securely grip the coupling element **104** via the groups **105** by the spring motion.

In other words, fingers 206 secure workpiece 104, as described by Markworth *et al.*, without moving sleeve 400 into place against the workpiece.

Actuation of trigger 500 is described at paragraph 51, on page 4 of Markworth, *et al.*, and includes squeezing handle 514 to advance sleeve 400 toward rod 114. Handle 514 is squeezing toward grip 218, thereby causing arms 414 of sleeve 400 to advance adjacent to fingers 206 to thereby prevent fingers 206 from separating. As stated by Markworth *et al.* in paragraph 51:

The handle **514** is then displaced, moved or squeezed toward the grip **218** in the direction of arrow A, as shown in **FIGS. 1A and 1B**. The displacement of the handle **514** causes the sleeve **400** to advance toward the rod **114** and coupling element **104**. Squeezing the handle **514** angularly displaces the trigger **500** moving the notch **222** of the body **200** out of the locked position from the indentation **510** of the trigger **500**. Thus, with a single continuous squeeze of the handle, the pusher bar **416** contacts the rod **114** at groove **418**. The rod **114** is then advanced into the recess or seat **102** of the coupling element **104** to the position shown in **FIG. 1D**, while the fingers **206** continue to grip the coupling element **104**. As the slide **300** and sleeve **400** advance, the arms **414** of the sleeve also advance adjacent to the fingers **206**. Thus, the arms **206** [Sic] prevent the fingers **206** from separating.

As described in paragraph 52, “instrument 100 further comprises a ratchet mechanism 700 at a springing connector 600 connecting the handle 514 and grip 218.” Springing connector 600 causes handle 514 to lock male tooth 708 in a step among teeth 704 of rack 702. Continued squeezing of handle 514 advances male tooth 708 to each of the female teeth. As stated at paragraph 54:

The springing connector **600** causes the handle to lock into this first step, advancing the slide and the sleeve forward the distance of one step. The user repeatedly squeezes the handle to displace

the male tooth a single step at a time into each of the female teeth. As this occurs, the slide 300 and sleeve 400 advance forward so that the pusher 416 contacts the rod 114 at groove 418 and urges the rod into position in the seat 102 into the coupling element 104 as illustrated in FIG. 1D at each step.

Paragraph 55 further explains the function of springing connector 600:

As the ratchet mechanism is operated, the springing connector 600 locks the male tooth. Thus, the user does not have to constantly apply pressure to the handle in order to maintain the position of the rod. Rather, the locking nature of the ratchet maintains the advancement of the slide and sleeve and in turn, the advancement of the rod. Additionally, the user may release his grasp on the instrument without threat of the rod 114 regressing back away from the coupling element 104, since the ratchet is in locked in position.

Therefore, and as can be seen from FIGS. 6A and 6B, springing connector 600 biases trigger 514 away from pistol grip 218, whereby male tooth 708 abuts a female tooth, as can be seen specifically in Fig. 6B. As explained in paragraph 55, the ratchet mechanism, provided by biasing male tooth 708 against a female tooth 704 by force of spring connector 600, prevents movement of sleeve 404 away from the workpiece, which, as stated in paragraph 55, would present the “threat of the rod 114 regressing back away from the coupling element 104.” Regardless of the intended use and functional statements associated with the device disclosed by Markworth, *et al.*, Applicants’ claim 1 does not read on the device taught by Markworth, *et al.* For example, Markworth, *et al.* do not disclose a device that includes a retaining spring element that directs a grabber toward a closed position within an outer sleeve when a trigger is released, as does Applicants’ claimed implant device. Specifically, retaining spring element 600 of Markworth, *et al.*, as identified by the Examiner, does not direct a grabber toward a closed position, whereby the grabber is substantially contained within the outer sleeve when the trigger is released, as the Examiner asserts. To the contrary, springing connector 600, as discussed above, biases trigger 514 away from pistol grip 218 which, when not blocked by ratchet 702, causes sleeve 404 to retract away from arms 206.

Further, there is no disclosure or suggestion in Markworth, *et al.* that actuation of trigger 514 in any direction releases a workpiece of any type. Instead, fingers 206 of longitudinal body 200, as discussed above, grip a workpiece, such as coupling element 104, without assistance of sleeve 416. Sleeve 416, as discussed above, when advanced into position against rod 114 and

coupling element 104 by squeezing handle 514, only prevents fingers 206 from separating. In other words, coupling element 104 is not released by actuation of trigger 514 in any direction. Therefore, Markworth *et al.* do not disclose or suggest an inner shaft having a grabber for mechanically engaging an implant, the inner shaft slidably disposed along a major access of the inner shaft within the outer sleeve, whereby actuation of the trigger extends the grabber from the outer sleeve to thereby release the implant, as required by Applicant's claim 1.

Applicant's claim 1 does not read on Markworth, *et al.* and, therefore, the subject matter of claim 1 is not anticipated by the teachings of Markworth, *et al.* Dependent claims 2-7, 9, 11, 12 and 15 all depend directly or indirectly from independent claim 1 and, therefore, also do not read on the teachings of Markworth, *et al.* Applicants' invention, as set forth in claims 1-7, 9, 11, 12 and 15, meets the requirements of 35 U.S.C. §102(e) in view of Markworth, *et al.*

Rejection of Claim 13 under of 35 U.S.C. §103(a)

Claim 13 stands rejected under of 35 U.S.C. §103(a) as being unpatentable over Markworth, *et al.* in view of U.S. Patent Publication No. 2005/0055031, by Lim (Lim). In particular, the Examiner stated that, although Markworth *et al.* do not disclose a pin located on a surface of the grabber, Lim discloses an implant device and teaches the use of an indicator pin to indicate the positioning of clamping members relative to one another. The Examiner concluded that, since the grabber of Markworth, *et al.* is elastic, such that application of a force causes the fingers to separate, it would have been obvious to one skilled in the art at the time the invention was made to construct the device of Markworth, *et al.*, with the grabber including an indicator pin, in view of Lim, in order to indicate the positioning of the clamping members relative to one another.

Claim 13 is dependent from independent claim 1. As discussed in detail in the previous Amendment, filed June 5, 2006, Lim does not include the elements of Applicants claim 1. Therefore, and in particular, Lim do not remedy the deficiencies of Markworth, *et al.* There is no disclosure or suggestion in Lim of Applicants' claimed implant device, wherein an inner shaft is slideably disposed within an outer sleeve coupled to a frame, whereby actuation of a trigger of the frame extends the grabber from the outer sleeve to thereby release the implant, and also including a retaining element for directing the grabber toward a closed position, whereby the grabber is substantially contained within the outer sleeve when the trigger is released. Therefore,

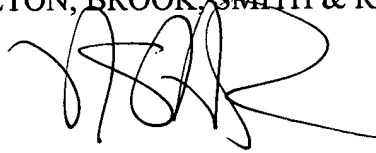
claim 13 also is not anticipated or suggested by the teachings of Markworth, *et al.*, nor is it disclosed or suggested by Markworth, *et al.* or Lim, taken either separately or combination. Therefore, the subject matter of Applicants' claim 13 meets the requirements of 35 U.S.C. § 103(a) in view of Markworth, *et al.* and Lim, taken either separately or in combination.

SUMMARY AND CONCLUSIONS

Applicants' invention, as claimed, meets the requirements of 35 U.S.C. §§ 102(e) and 103(a) in view of Markworth, *et al.* and Lim, taken either separately or in combination. Reconsideration and withdrawal of the outstanding rejections respectfully is requested. If the Examiner believes that a telephone conference would expedite prosecution of this application, she is respectfully requested to contact Applicants' undersigned Attorney.

Respectfully submitted,

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